Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DAVID A. GOLDMAN

Appeal No. 2002-1657
Application No. 09/134,981

ON BRIEF

Before BARRETT, RUGGIERO, and DIXON, Administrative Patent Judges.
RUGGIERO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal from the Examiner's rejection of claims 1-9 and 10-20, which are all of the claims pending in the present application. Claim 10 has been canceled.

The claimed invention relates to a system and method for automatically generating embroidery designs from scanned color images. An image data file produced from the scanned images is provided to an embroidery generating program which executes a series of sub-routines to produce an embroidery data output file

which is fed to a sewing device for stitching the embroidery design.

Claim 1 is illustrative of the invention and reads as follows:

1. A system for automatically producing an embroidery design, the system comprising:

a) means for inputting an embroidery pattern into an image data file, the image data file comprising a plurality of pixels, each pixel comprising a bitmap representing a color;

b) processing means operatively connected to said inputting means for creating skeletal and edge contour data and storing said image data file; and

c) an embroidery data generating mechanism operatively connected to said processing means for labeling and interrelating said skeletal and edge contour data and generating a complex embroidery pattern directly from a scanned, color image.

The Examiner relies on the following prior art:

Futamura	5,740,056	Apr. 14, 1998

Claims 1-9 and 11-20, all of the appealed claims, stand rejected 35 U.S.C. § 102(e) as being anticipated by Futamura.

Rather than reiterate the arguments of Appellant and the Examiner, reference is made to the Briefs[1] and Answer for the respective details.

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[1] The Appeal Brief was filed August 20, 2001 (Paper No. 10). In response to the Examiner's Answer dated October 2, 2001 (Paper No. 11), a Reply Brief was filed January 29, 2002 (Paper No. 12), which was acknowledged and entered by the Examiner as indicated in the communication dated February 19, 2002 (Paper No. 13).

OPINION

We have carefully considered the subject matter on appeal, the rejection advanced by the Examiner and the evidence of anticipation relied upon by the Examiner as support for the rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, Appellant's arguments set forth in the Briefs along with the Examiner's rationale in support of the rejection and arguments in rebuttal set forth in the Examiner's Answer.

It is our view, after consideration of the record before us, that the Futamura reference fully meets the invention as set forth in claims 1, 3-9 and 11-19. We reach the opposite conclusion with respect to claims 2 and 20. Accordingly, we affirm-in-part.

We note that anticipation is established only when a single prior art reference discloses, expressly or under the principles of inherency, each and every element of a claimed invention as well as disclosing structure which is capable of performing the recited functional limitations. RCA Corp. v. Applied Digital Data Systems, Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir.); cert. dismissed, 468 U.S. 1228 (1984); W.L. Gore and Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

With respect to appealed independent claim 1, the Examiner indicates how the various limitations are read on the disclosure of Futamura. In particular, the Examiner (Answer, pages 3 and 4) points to the illustrations at Figures 4-6 of Futamura along with the accompanying description beginning at column 5, line 13.

In our view, the Examiner's analysis is sufficiently reasonable that we find that the Examiner has as least satisfied the burden of presenting a prima facie case of anticipation. The burden is, therefore, upon Appellant to come forward with evidence and/or arguments which persuasively rebut the Examiner's prima facie case. Only those arguments actually made by Appellant have been considered in this decision. Arguments which Appellant could have made but chose not to make in the Briefs have not been considered [see 37 CFR § 1.192(a)].

In response to the Examiner's anticipation rejection, Appellant has offered several arguments in support of his contention that Futamura fails to teach or suggest numerous features of appealed claim 1. Initially, Appellant contends (Brief, page 10; Reply Brief, page 2) that, in contrast to the claimed invention which is directed to color processing, Futamura is limited to monochrome, i.e., black and white, processing. We do not find this argument persuasive so as to convince us of any error

in the Examiner's position (Answer, page 6) that the black and white images in Futamura are color types, at least in the manner broadly claimed by Appellant. We would point out that, although Appellant emphasizes in the arguments (Brief, at 10) that "color" refers to colors of a spectrum, there is no such language in the appealed claims.

We find to be equally without merit Appellant's further assertion (Brief, page 11) that Futamura lacks a disclosure of any interrelating of skeletal and edge contour data as recited in claim 1. In Appellant's view (Reply Brief, pages 2 and 3), no such interrelating can take place in Futamura since there is no depiction of skeletal data of any kind.

Our review of the description of the Figures 5 and 6 illustrations in Futamura referenced by the Examiner reveals, however, that the inner and outer edge contours (Figure 5) are processed by removing pixels between the inner and outer peripheries to produce a thinned or "skeletonized" contour (Figure 6).[2] We fail to see why this inner and outer periphery data processing to produce a resulting skeletal image would not

[2] Enclosed with this decision is a copy of pages 491-494 from Digital Image Processing by Rafael Gonzalez and Richard E. Woods (Addison-Wesley Publishing Company, 1992) which describes an example of a thinning or "skeletonizing" algorithm.

correspond to the claimed interrelating of skeletal and edge contour data.

In view of the above discussion, since the Examiner's prima facie case of anticipation has not been overcome by any convincing arguments from Appellant, the Examiner's 35 U.S.C. § 102(b) rejection of claim 1 based on Futamura, is sustained.

For at least the above reasons, we also sustain the Examiner's 35 U.S.C. § 102(e) rejection of independent claim 12. As previously discussed, Futamura processes edge contour data to produce skeletal data by selectively removing pixels between the outer and inner edges. In our view, Futamura provides a clear teaching of utilizing this pixel deletion process to classify objects according to thickness. For example, Futamura discloses at column 6, lines 54-56 that "[w]hen only a small number of pixel-deletion processes N were performed, this indicates that the original line corresponding to the value N had a narrow width."

Turning to a consideration of dependent claims 3 and 18, argued together by Appellant (Brief, page 13), we sustain the Examiner's anticipation rejection of these claims as well. Appellant's arguments notwithstanding, we reiterate our previous finding of clear teaching in Futamura of line fitting using both edge and skeletal contour data. Similarly, we sustain the

35 U.S.C. § 102(e) rejection of dependent claims 4, 5, 13, and 14, grouped together by Appellant's arguments (Brief, page 13), since, contrary to Appellant's contention, we find a clear suggestion in Futamura of stitch angle determination at column 6, line 41 through column 7, line 16 as pointed out by the Examiner (Answer, page 5).

We also sustain the Examiner's anticipation rejection of dependent claims 6-9, 11, 15-17, and 19 based on Futamura.

With respect to claims 6-9, the extent of Appellant's arguments (Brief, pages 13 and 14) is to repeat the language of the claims with a general allegation that the references do not teach or suggest the claimed limitations.[2] Simply pointing out what a claim requires with no attempt to point out how the claims patentably distinguish over the prior art does not comply with 37 CFR § 1.192(c)(8) and does not amount to a separate argument for patentability. In re Nielson, 816 F.2d 1567, 1572, 2 USPQ2d 1525,1528 (Fed. Cir. 1987). Further, our review of the Examiner's position finds no error in the Examiner's analysis (Answer, pages 5 and 6) which identifies corresponding structure in the disclosure of Futamura.

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[2] Although Appellant mentions (Brief, page 14) that dependent claim 8 recites the interpretation of regular and singular regions, we find no such recitation since the claim language requires only " . . . evaluating a plurality of singular regions."

With respect to dependent claim 11, the Examiner's rejection is sustainable since, as discussed supra, we find Appellant's argument with regard to the alleged lack of color processing in Futamura to be unpersuasive. Contrary to Appellant's contention, there is no continuous spectrum color selection requirement in claim 11, but, rather, merely a claimed "uniform" color which, in our view, does not distinguish over Futamura. Also, since Appellant has provided no separate arguments for patentability with respect to dependent claims 15-17 and 19, these claims fall with parent independent claims 1 and 12.[3] Note In re King, 801 F.2d 1324, 1325, 231 USPQ 136, 137 (Fed. Cir. 1986); In re Sernaker, 702 F.2d 989, 991, 217 USPQ 1, 3 (Fed. Cir. 1983).

Turning to a consideration of the Examiner's 35 U.S.C. § 102(e) rejection of claims 2 and 20, we note that, while we found Appellant's arguments to be unpersuasive with respect to the rejection of claims 1, 3-9, and 11-19 previously discussed, we reach the opposite conclusion with respect to claims 2 and 20. Each of these claims requires the location and interpretation of a " . . . set of regular and singular regions" of embroidery data

[3] Although Appellant (Brief, page 2) states that dependent claims 15 and 19 have been indicated to be allowable, we find nothing in the record that indicates this is the case as pointed out by the Examiner (Answer, pages 2 and 3).

image files. Although the Examiner directs attention (Answer, page 7) to column 8, lines 42-67 of Futamura, we find nothing in this portion, or elsewhere in Futamura, which satisfies the language of claims 2 and 20. We are in agreement with Appellant (Reply Brief, page 4) that the Examiner has never shown or explained how the "region labelling" processes mentioned in Futamura (column 8, lines 44-45) relate to the claimed interpreting of regular and singular regions. We do make the observation that independent claim 20 sets forth a very broad recitation of Appellant's invention since, for example, the claimed optimum sew order is not recited as being dependent on or responsive to the generated output image file. Nevertheless, we find no support in the disclosure of Futamura that would support the Examiner's conclusion of anticipation based on Futamura.

In summary, with respect to the Examiner's 35 U.S.C. § 102(e) rejection of appealed claims 1-9 and 11-20 based on Futamura, we have sustained the rejection of claims 1, 3-9, and 11-19, but have not sustained the rejection of claims 2 and 20. Therefore, the Examiner's decision rejecting claims 1-9 and 11-20 is affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

LEE E. BARRETT)
Administrative Patent Judge)
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JOSEPH F. RUGGIERO) BOARD OF PATENT
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